

CLAIMS

What is claimed is:

1. A coated abrasive belt comprising:
 - a) a strip of coated abrasive having a first portion and a second portion; and
 - b) a joint adhesive for joining the first portion to the second portion to form the belt, wherein the adhesive is formed from a blocked isocyanate, urethane system.
2. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a blocking agent selected from the group that includes phenols, oximes, alcohols, caprolactam, and diethyl malonate.
3. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes an amine.
4. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes an alcohol.
5. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a polyol.
6. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a high molecular weight prepolymer containing hydroxyl functionality.
7. The adhesive of Claim 1 wherein the blocked isocyanate, urethane system includes a high molecular weight prepolymer containing isocyanate functionality.

8. A method for forming a coated abrasive belt comprising:
 - a) providing a coated abrasive strip having first and second opposed ends;
and
 - b) joining the ends of the strip with an adhesive comprising a blocked isocyanate, urethane system.
9. The method of Claim 8 further comprising the step of crosslinking the adhesive with an amine.
10. The method of Claim 8 further comprising the step of crosslinking the adhesive with an alcohol.
11. The method of Claim 8 further comprising the step of crosslinking the adhesive with a polyol.
12. A method for forming a coated abrasive belt comprising joining ends of the belt together with an adhesive comprising a blocked isocyanate, urethane system.
13. A method for forming a coated abrasive belt comprising:
 - a) forming a blocked isocyanate, urethane system that includes a blocked isocyanate terminated polyurethane prepolymer;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system to crosslink the blocked isocyanate with a polyamine or a polyol.

14. A method for forming a coated abrasive belt comprising:
 - a) forming a blocked isocyanate, urethane system that includes a high molecular weight polyurethane containing hydroxyl functionality;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system to crosslink the high molecular weight polyurethane containing hydroxyl functionality with a blocked polyisocyanate.
15. A method for forming a coated abrasive belt comprising:
 - a) forming a blocked isocyanate, urethane system by mixing a first component with a second component;
 - b) joining ends of a strip of coated abrasive with the blocked isocyanate, urethane system; and
 - c) heating the strip to cure the blocked isocyanate, urethane system.
16. The method of Claim 15 wherein the first component includes a blocked isocyanate terminated polyurethane prepolymer and the second component includes polyamine or polyol.
17. The method of Claim 15 wherein the first component includes a high molecular weight polyurethane containing hydroxyl functionality and the second component includes blocked polyisocyanate.